



Acceleration of the GrIS mass loss as observed by GRACE

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The mass loss of the Greenland Ice Sheet (GrIS) has previously been analysed in a variety of ways, including altimetry, gravimetry and mass budget calculations, establishing a continuing decrease in the ice mass, with a number of studies finding acceleration in the mass loss. Here, we examine this acceleration and its statistical significance, using different sets of processed gravimetric data from the GRACE mission. Using an OLS model that takes annual and subannual variation into account, we compare three different GRACE solutions, determining the spatial variability of the acceleration and confidence intervals for the overall acceleration, with additional qualitative evaluation from ICESat data.